

IN THE SPECIFICATION

[0050] To achieve the above object, ~~the present invention of claim 1 is there is~~ provided a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units, comprising:

[0056] ~~The present invention of claim 4 is~~ The inventions also provide a coding method in accordance with claim 1, wherein said input image data comprises red, green and blue signals, and image data obtained after said signal format conversion comprises luminance, first color difference and second color difference signals.

[0057] ~~The present invention of claim 7 is a coding method in accordance with claim 1,~~ wherein In some embodiments of the inventions said input image data comprises luminance, first color difference and second color difference signals, and image data obtained after said signal format conversion comprises luminance, first color difference and second color difference signals having a configuration different from that before said conversion.

[0058] ~~The present invention of claim 10 is~~ inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units, comprising:

[0061] ~~The present invention of claim 13 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0067] ~~The present invention of claim 16 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data

into block units and by carrying out orthogonal transform in said block units,

[0073] ~~The present invention of claim 22 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0080] ~~The present invention of claim 25 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0087] ~~The present invention of claim 28 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0094] ~~The present invention of claim 31 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0101] ~~The present invention of claim 34 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data into block units and by carrying out orthogonal transform in said block units,

[0108] ~~The present invention of claim 37 is~~ The inventions also provide a coding method for coding input image data in a predetermined signal format by dividing said image data

into block units and by carrying out orthogonal transform in said block units,

[0115] ~~The present invention of claim 40 is~~ The inventions also provide a decoding method for subjecting coded data to variable-length decoding, inverse orthogonal transform and signal format conversion to obtain image data,

[0120] ~~The present invention of claim 43 is~~ The inventions also provide a decoding method for subjecting coded data to variable-length decoding, inverse orthogonal transform and signal format conversion to obtain image data,

[0127] ~~The present invention of claim 46 is~~ The inventions also provide a decoding method for subjecting coded data to variable-length decoding, inverse orthogonal transform and signal format conversion to obtain image data,

[0133] ~~The present invention of claim 49 is~~ The inventions also provide a decoding method for subjecting coded data to variable-length decoding, inverse orthogonal transform and signal format conversion to obtain image data,

[0139] ~~The present invention of claim 73~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data,

[0146] ~~The present invention of claim 76 is~~ The inventions also provide a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data, at the time when output value $Y0$, i.e., $X0+X1$, and output value $Y1$, i.e., $X0-X1$, are generated from two input values $X0$ and $X1$ by inverse orthogonal transform computation and the like,

[0152] ~~The present invention of claim 79 is~~ The inventions also provide a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data,

[0159] ~~The present invention of claim 82~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data,

[0166] ~~The present invention of claim 85~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data,

[0173] ~~The present invention of claim 88~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data,

[0180] ~~The present invention of claim 91~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion in block units to obtain image data, comprising:

[0183] The ~~present invention of claim 94~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion in block units to obtain image data,

[0189] The ~~present invention of claim 97~~ The inventions also provide is a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion in block units to obtain image data,

[0197] The ~~present invention of claim 103~~ The inventions also provide is a decoding method in accordance with claim 97, wherein, when said existence range detection is carried out, in the case when orthogonal coefficient components are rearranged by using zigzag scanning during coding, an existence range to be stored in each orthogonal transform unit in said first direction is set to the position of the last non-zero orthogonal coefficient component.

[0198] The ~~present invention of claim 109 is~~ The inventions also provide a decoding method for subjecting coded data to inverse orthogonal transform and signal format conversion to obtain image data, comprising:

[0203] The ~~present invention of claim 112 is~~ The inventions also provide a decoding method in accordance with claim 109, wherein said image data in said predetermined signal format comprises luminance, first color difference and second color difference signals, and image data after signal format conversion comprises red, green and blue signals.

[0204] ~~The present invention of claim 115 is~~ The inventions also provide a decoding method in accordance with claim 109, wherein said image data in said predetermined signal format comprises luminance, first color difference and second color difference signals, and image data after signal format conversion comprises luminance, first color difference and second color difference signals having a configuration different from that before conversion.

[0253] ~~The above mentioned embodiment mainly corresponds to claims 1, 2 and 3 of the present invention.~~

[0259] ~~The above mentioned embodiment mainly corresponds to claims 10 to 12 of the present invention.~~

[0267] ~~The above mentioned embodiment mainly corresponds to claims 13 to 15 of the present invention.~~

[0275] ~~The above mentioned embodiment mainly corresponds to claims 16 to 18 of the present invention.~~

[0285] ~~The above mentioned embodiment mainly corresponds to claims 22 to 24 and 73 to 75 of the present invention.~~

[0290] ~~The above mentioned embodiment mainly corresponds to claims 25 to 27 and 76 to 78 of the present invention.~~

[0294] ~~The above mentioned embodiment mainly corresponds to claims 28 to 30 and 79~~

~~to 81 of the present invention.~~

~~[0299] The above-mentioned embodiment mainly corresponds to claims 31 to 33 and 82 to 84 of the present invention.~~

~~[0304] The above-mentioned embodiment mainly corresponds to claims 34 to 36 and 85 to 87 of the present invention.~~

~~[0312] The above-mentioned embodiment mainly corresponds to claims 37 to 39 and 88 to 90 of the present invention.~~

~~[0333] The above-mentioned embodiment mainly corresponds to claims 40 to 42 of the present invention.~~

~~[0342] The above-mentioned embodiment mainly corresponds to claims 43 to 45 of the present invention.~~

~~[0351] The above-mentioned embodiment mainly corresponds to claims 46 to 48 of the present invention.~~

~~[0360] The above-mentioned embodiment mainly corresponds to claims 49 to 51 of the present invention.~~

~~[0367] The above-mentioned embodiment mainly corresponds to claims 91 to 93 of the present invention.~~

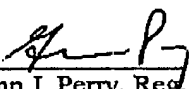
[0374] ~~The above mentioned embodiment mainly corresponds to claims 94 to 96 of the present invention.~~

[0383] ~~The above mentioned embodiment mainly corresponds to claims 97 to 99 of the present invention.~~

[0392] ~~The above mentioned embodiment mainly corresponds to claims 109 to 111 of the present invention.~~

All matters having been attended to, it is urged that this application be returned to publications branch and published with the changes made herein.

Respectfully submitted,
SMITH GAMBRELL & RUSSELL, LLP



Glenn J. Perry, Reg. No. 28,458
1850 M. Street, N.W., Suite 800
Washington, DC 20036
Telephone: (202) 263-4300
Facsimile: (202) 263-4329

Date: February 8, 2006

SGRDC\247253.1